612.40181X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: E. DURET et al.

Serial No.: (Not Yet Assigned)

Filed: (On Even Date Herewith)

For: AUTOMATIC PIPE GRIDDING METHOD ALLOWING IMPLEMENTATION OR FLOW MODELLING CODES

Art Unit: (Not Yet Assigned)

Examiner: (Not Yet Assigned)

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

June 19, 2001

Sir:

Prior to calculation of the filing fee, please amend the above-identified application as follows.

IN THE CLAIMS

Please replace original clam 4 with the following claim:

4) A gridding method as claimed in claim 1, comprising previous simplification of the topography of the pipe.

Please add new claims 9-18 as follows:

--9) A gridding method as claimed in claim 2, comprising previous simplification of the topography of the pipe.

10) A gridding method as claimed in claim 9, comprising representing the pipe in form of a graph connecting the curvilinear abscissa and the level variation, and simplifying the number of sections by assigning to each point between two successive sections a weight taking into account the length (L1, L2) of the sections and the respective slopes (P1, P2) thereof and by selecting, from among the points arranged in increasing or decreasing order of weight, those whose weight is the greatest.

11) A gridding method as claimed in claim 10, comprising selecting the points of the pipe whose weight is the greatest by locating in the arrangement of points a weight discontinuity that is above a certain fixed threshold (ΔP).

12) A gridding method as claimed in claim 10, comprising representing the pipe in form of a graph connecting the curvilinear abscissa and the level variation, and simplifying the number of sections by forming the frequency spectrum of the curve representative of the pipe topography, attenuating the highest frequencies of the spectrum showing the slighest topography variations and reconstructing a simplified topography corresponding to the rectified frequency spectrum.

13) A gridding method as claimed in claim 12, comprising sampling the curve representative of the pipe topography with a sampling interval so selected that the smallest pipe section contains at least two sampling intervals, determining the frequency spectrum of the curve sampled by application, correcting the spectrum by low-pass filtering whose cutoff frequency is selected according to a set maximum number of cells for subdividing the pipe, and determining the topography corresponding to the rectified frequency spectrum.

14) A gridding method as claimed in claim 3, comprising previous simplification of the topography of the pipe.

15) A gridding method as claimed in claim 14, comprising representing the pipe in form of a graph connecting the curvilinear abscissa and the level variation, and simplifying the number of sections by assigning to each point between two successive sections a weight taking into account the length (L1, L2) of the sections and the respective slopes (P1, P2) thereof and by selecting, from among the points arranged in increasing or decreasing order of weight, those whose weight is the greatest.

16) A gridding method as claimed in claim 15, comprising selecting the points of the pipe whose weight is the greatest by locating in the arrangement of points a weight discontinuity that is above a certain fixed threshold (ΔP).

17) A gridding method as claimed in claim 15, comprising representing the pipe in form of a graph connecting the curvilinear abscissa and the level variation,

curve representative of the pipe topography, attenuating the highest frequencies of the spectrum showing the slighest topography variations and reconstructing a simplified topography corresponding to the rectified frequency spectrum.

18) A gridding method as claimed in claim 17, comprising sampling the curve representative of the pipe topography with a sampling interval so selected that the smallest pipe section contains at least two sampling intervals, determining the frequency spectrum of the curve sampled by application, correcting the spectrum by low-pass filtering whose cutoff frequency is selected according to a set maximum number of cells for subdividing the pipe, and determining the topography corresponding to the rectified frequency spectrum.--

REMARKS

The claims have been amended to remove multiple dependent claims prior to calculation of the filing fee.

Please charge any shortage in fees due in connection with the filing of this paper, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (612.40181X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Donald E. Stout
Registration No. 26,422

DES:pc
(703) 312-6600

Attachment

MARKED-UP CLAIM

4) A gridding method as claimed in ~~any one of claims 1 to 3,~~ claim 1, comprising previous simplification of the topography of the pipe.